

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Applicant(s): Wilganowski et al

Application No.: 10/091,628

Filed: March 6, 2002

Group Art Unit: 1635

Title: Novel Human Transporter Proteins and  
Polynucleotides Encoding the Same

Examiner: Not Yet Assigned

Attorney Docket No.: LEX-0314-USA

Assistant Commissioner for Patents  
Arlington, VA 22202  
Box DD

**INFORMATION DISCLOSURE STATEMENT**

Dear Sir:

This Information Disclosure Statement is submitted:

- ☒ under 37 CFR 1.97(b), or  
(Within three months of filing national application; or date of entry of international application; or before mailing date of first office action on the merits; whichever occurs last)
- ☐ under 37 CFR 1.97(c) together with either a:  
☐ Certification under 37 CFR 1.97(e), or  
☐ a \$240.00 fee under 37 CFR 1.17(p), or  
(After the CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)
- ☐ under 37 CFR 1.97(d) together with a:  
☐ Certification under 37 CFR 1.97(e), and  
☐ a petition under 37 CFR 1.97(d)(2)(ii), and  
☐ a \$130.00 petition fee set forth in 37 CFR 1.17(i)(1).  
(Filed after final action or notice of allowance, whichever occurs first, but before payment of the issue fee)

☒ Applicant(s) submit herewith Form PTO 1449-Information Disclosure Citation together with copies, of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.



24231

PATENT TRADEMARK OFFICE

Applicant submits that the above references taken alone or in combination neither anticipate nor render obvious the present invention. Consideration of the foregoing in relation to this application is respectfully requested.

The Commissioner is hereby authorized to charge any additional fee required or credit any overpayment for this Information Disclosure Statement to Lexicon Genetics Deposit Account No. 50-0892. A copy of this sheet is enclosed.

It is requested that the information disclosed herein be made of record in this application.

Respectfully submitted,

June 28, 2002  
Date

Lance K. Ishimoto by David W. Heller *DAVID W. HELLER*  
Lance K. Ishimoto *REG. NO. 41,071*  
Reg. No. 41,866

LEXICON GENETICS INCORPORATED  
(281) 863-3333



24231

PATENT TRADEMARK OFFICE

Substitute for form 1449A/PTO

**Complete if Known**

Sheet

1

of

3

Application Number

10/091,628

Filing Date

Mar 6, 2002

**First Named Inventor**

Wilganowski

### Group Art Unit

1635

Examiner Name \_\_\_\_\_

**Not Yet Assigned**

Attorney Docket Number

LEX-0314-USA

## U.S. PATENT DOCUMENTS

Examining Initials*	Cite to U.S. Patent Document	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	AA	4,215,051		Schroeder et al	07/29/80	
	AB	4,376,110		David et al	03/08/83	
	AC	4,594,595		Struckman	06/10/86	
	AD	4,631,211		Houghten	12/23/86	
	AE	4,689,405		Frank et al	08/25/87	
	AF	4,713,326		Dattagupta et al	12/15/87	
	AG	4,873,191		Wagner et al	10/10/89	
	AH	4,946,778		Ladner et al	08/07/90	
	AI	5,252,743		Barrett et al	10/12/93	
	AJ	5,272,057		Smulson et al	12/21/93	
	AK	5,424,186		Fodor et al	06/13/95	
	AL	5,445,934		Fodor et al	08/29/95	
	AM	5,459,127		Felgner et al	10/17/95	
	AN	5,556,752		Lockhart et al	09/17/96	
	AO	5,700,637		Southern	12/23/97	
	AP	5,744,305		Fodor et al	04/28/98	
	AQ	5,830,721		Stemmer et al	11/03/98	
	AR	5,837,458		Minshull et al	11/17/98	
	AS	5,869,336		Meyer et al.	02/09/99	
	AT	5,877,397		Lonberg et al	03/02/99	
	AU	5,948,767		Scheule et al.	09/07/99	
	AV	6,075,181		Kucherlapati et al	06/13/00	
	AW	6,110,490		Thierry	08/29/00	
	AX	6,114,598		Kucherlapati et al	09/05/00	
	AY	6,150,584		Kucherlapati et al.	11/21/00	

**Examiner  
Signature**

Date  
Considered

\*EXAMINER: Initial reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

**Burden Hour Statement:** This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.**



24231

PATENT TRADEMARK OFFICE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449A/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Application Number	10/091,628
		Filing Date	Mar 6, 2002
		First Named Inventor	Wilganowski
		Group Art Unit	1635
		Examiner Name	Not Yet Assigned
Sheet 1 of 3	Attorney Docket Number	LEX-0314-USA	

U.S. PATENT DOCUMENTS						
Examiner Initials*	No.	Patent Document Number	Kind Code* (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA	4,215,051		Schroeder et al	07/29/80	
	AB	4,376,110		David et al	03/08/83	
	AC	4,594,595		Struckman	06/10/86	
	AD	4,631,211		Houghten	12/23/86	
	AE	4,689,405		Frank et al	08/25/87	
	AF	4,713,326		Dattagupta et al	12/15/87	
	AG	4,873,191		Wagner et al	10/10/89	
	AH	4,946,778		Ladner et al	08/07/90	
	AI	5,252,743		Barrett et al	10/12/93	
	AJ	5,272,057		Smulson et al	12/21/93	
	AK	5,424,186		Fodor et al	06/13/95	
	AL	5,445,934		Fodor et al	08/29/95	
	AM	5,459,127		Felgner et al	10/17/95	
	AN	5,556,752		Lockhart et al	09/17/96	
	AO	5,700,637		Southern	12/23/97	
	AP	5,744,305		Fodor et al	04/28/98	
	AQ	5,830,721		Stemmer et al	11/03/98	
	AR	5,837,458		Minshull et al	11/17/98	
	AS	5,869,336		Meyer et al.	02/09/99	
	AT	5,877,397		Lonberg et al	03/02/99	
	AU	5,948,767		Scheule et al.	09/07/99	
	AV	6,075,181		Kucherlapati et al	06/13/00	
	AW	6,110,490		Thierry	08/29/00	
	AX	6,114,598		Kucherlapati et al	09/05/00	
	AY	6,150,584		Kucherlapati et al.	11/21/00	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



24231

PATENT TRADEMARK OFFICE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449B/PTO

Complete if Known

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

FEB 12 2004 (use as many sheets as necessary)

Sheet 2 of 3

Application Number	10/091.628
Filing Date	Mar 6, 2002
First Named Inventor	Wilganowski
Group Art Unit	1635
Examiner Name	Not Yet Assigned
Attorney Docket Number	LEX-0314-USA

**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No.†	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
	AZ	Bird et al, 1988, "Single-Chain Antigen-Binding Proteins", Science 242:423-426.	
	BA	Bitter et al, 1987, "Expression and Secretion Vectors for Yeast", Methods in Enzymology 153:516-544.	
	BB	Colbere-Garapin et al, 1981, "A New Dominant Hybrid Selective Marker for Higher Eukaryotic Cells", J. Mol. Biol. 150:1-14.	
	BC	Cote et al, 1983, "Generation of human monoclonal antibodies reactive with cellular antigens", PNAS 80:2026-2030.	
	BD	Gautier et al, 1987, "α-DNA IV: α-anomeric and β-anomeric tetrathymidylates covalently linked to intercalating oxazolopyridocarbazole. Synthesis, physicochemical properties and poly (rA) binding", Nucleic Acids Research 15(16):6625-6641.	
	BE	Gordon, 1989, "Transgenic Animals", International Review of Cytology, 115:171-229.	
	BF	Greenspan et al, 1993, "Idiotypes: structure and immunogenicity", FASEB Journal 7:437-444.	
	BG	Gu et al, 1994, "Deletion of a DNA Polymerase β Gene Segment in T Cells Using Cell Type-Specific Gene Targeting", Science 265:103-106.	
	BH	Huse et al, 1989, "Generation of a Large Combinatorial Library of the Immunoglobulin Repertoire in Phage Lambda", Science 246:1275-1281.	
	BI	Huston et al, 1988, "Protein engineering of antibody binding sites: Recovery of specific activity in an anti-digoxin single-chain Fv analogue produced in Escherichia coli", Proc. Natl. Acad. Sci. USA 85:5879-5883.	
	BJ	Inoue et al, 1987, "Sequence-dependent hydrolysis of RNA using modified oligonucleotide splints and R Nase H", FEBS Letters 215(2):327-330.	
	BK	Inoue et al, 1987, "Synthesis and hybridization studies on two complementary nona(2'-O-methyl)ribonucleotides", Nucleic Acids Research 15(15):6131-6149.	
	BL	Inouye & Inouye, 1985, "Up-promoter mutations in the lpp gene of Escherichia coli", Nucleic Acids Research 13(9):3101-3110.	
	BM	Janknecht et al, 1991, "Rapid and efficient purification of native histidine-tagged protein expressed by recombinant vaccinia virus", PNAS 88:8972-8976.	
	BN	Kohler & Milstein, 1975, "Continuous cultures of fused cells secreting antibody of predefined specificity", Nature 256:495-497.	
	BO	Lakso et al, 1992, "Targeted oncogene activation by site-specific recombination in transgenic mice", Proc. Natl. Acad. Sci. USA 89:6232-6236.	
	BP	Lavitrano et al, 1989, "Sperm Cells as Vectors for Introducing Foreign DNA into Eggs: Genetic Transformation of Mice", Cell 57:717-723.	
	BQ	Lo, 1983, "Transformation by Iontophoretic Microinjection of DNA: Multiple Integrations without Tandem Insertions", Mol. & Cell. Biology 3(10):1803-1814.	
	BR	Logan et al, 1984, "Adenovirus tripartite leader sequence enhances translation of mRNAs late after infection", Proc. Natl. Acad. Sci. USA 81:3655-3659.	
	BS	Lowy et al, 1980, "Isolation of Transforming DNA: Cloning the Hamster apt Gene", Cell 22:817-823.	
	BT	Morrison et al, 1984, "Chimeric human antibody molecules: Mouse antigen-binding domains with human constant region domains", Proc. Natl. Acad. Sci. USA 81:6851-6855.	
	BU	Mulligan & Berg, 1981, "Selection for animal cells that express the Escherichia coli gene coding for xanthine-guanine phosphoribosyltransferase", Proc. Natl. Acad. Sci. USA 78(4):2072-2076.	
	BV	Neuberger et al, 1984, "Recombinant antibodies possessing novel effector functions", Nature 312:604-608.	
	BW	Nisonoff, 1991, "Idiotypes: Concepts and Applications", J. of Immunology 147:2429-2438.	
	BX	O'Hare et al, 1981, "Transformation of mouse fibroblasts to methotrexate resistance by a recombinant plasmid expressing a prokaryotic dihydrofolate reductase", Proc. Natl. Acad. Sci. USA 78(3):1527-1531.	

Please type a plus sign (+) inside this box → ☐

Approved for use through 10/31/99. OMB 0651-0031  
 Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE  
 Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449B/PTO		<b>Complete If Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>		Application Number	10/091,628
		Filing Date	Mar 6, 2002
		First Named Inventor	Wilganowski
		Group Art Unit	1635
		Examiner Name	Not Yet Assigned
(use as many sheets as necessary)		Attorney Docket Number	LEX-0314-USA
Sheet	3		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
BY	Santerre et al, 1983, "Easy identification of cDNA clones", EMBO Journal 2(10):1791-1794.	
BZ	Santerre et al, 1984, "Expression of prokaryotic genes for hygromycin B and G418 resistance as dominant-selection markers in mouse L cells", Gene 30:147-156.	
CA	Sarin et al, 1988, "Inhibition of acquired immunodeficiency syndrome virus by oligodeoxynucleoside methylphosphonates", Proc. Natl. Acad. Sci. USA 85:7448-7451.	
CB	Smith et al, 1983, "Molecular Engineering of the Autographa californica Nuclear Polyhedrosis Virus Genome: Deletion Mutations within the Polyhedrin Gene", J. Virol. 46(2):584-593.	
CC	Stein et al, 1988, "Physicochemical properties of phosphorothioate oligodeoxynucleotides", Nucleic Acids Research 16(8):3209-3221.	
CD	Szybalska & Szybalski, 1962, "Genetics of Human Cell Lines, IV. DNA-Mediated Heritable Transformation of a Biochemical Trait", Proc. Natl. Acad. Sci. USA 48:2026-2034.	
CE	Takeda et al, 1985, "Construction of chimaeric processed immunoglobulin genes containing mouse variable and human constant region sequences", Nature 314:452-454.	
CF	Thompson et al, 1989, "Germ Line Transmission and Expression of a Corrected HPRT Gene Produced by Gene Targeting in Embryonic Stem Cells", Cell 56:313-321.	
CG	Van Der Putten et al, 1985, "Efficient insertion of genes into the mouse germ line via retroviral vectors", Proc. Natl. Acad. Sci. USA 82:6148-6152.	
CH	Van Heeke et al, 1989, "Expression of Human Asparagine Synthetase in Escherichia coli", J. Biol. Chemistry 264(10):5503-5509.	
CI	Ward et al, 1989, "Binding activities of a repertoire of single immunoglobulin variable domains secreted from Escherichia coli", Nature 341:544-546.	
CJ	Wigler et al, 1977, "Transfer of Purified Herpes Virus Thymidine Kinase Gene to Cultured Mouse Cells", Cell 11:223-232.	
CK	Wigler et al, 1980, "Transformation of mammalian cells with an amplifiable dominant-acting gene", Proc. Natl. Acad. Sci. USA 77(6):3567-3570.	

Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.